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Joint Datalink Information Combat Execution

Program Brief for NetCentric Operations

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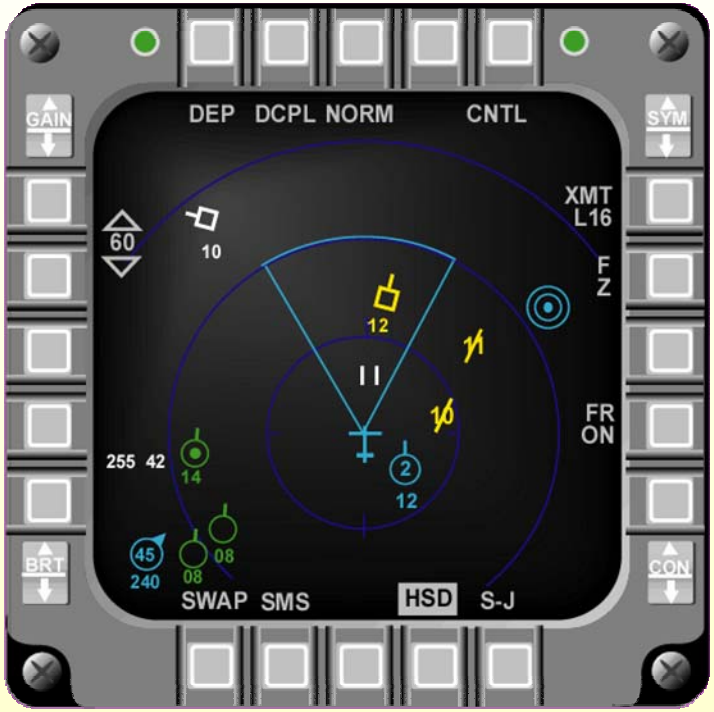
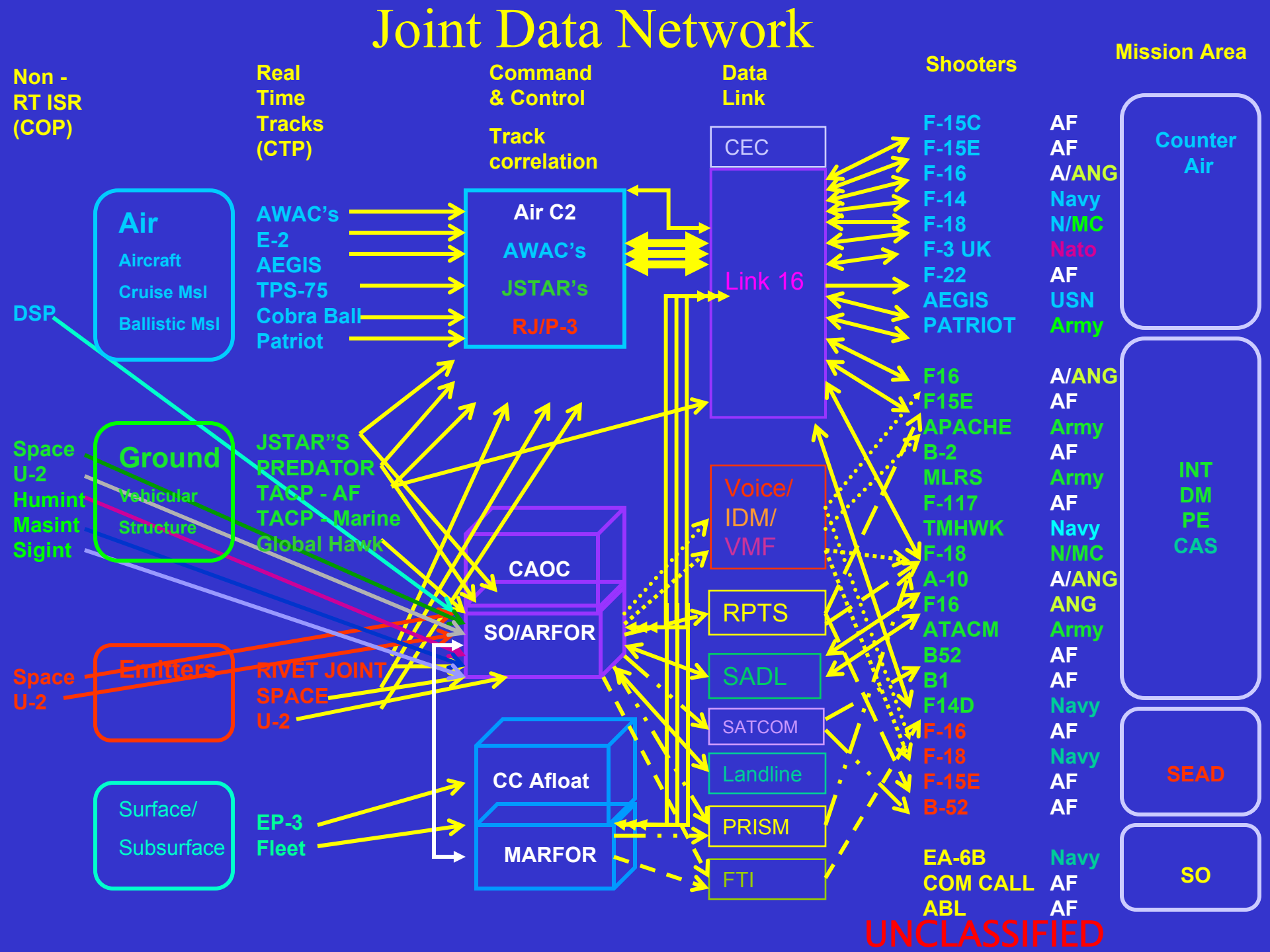
Joint Datalink Information Combat Execution



Charter:

Develop JTTP that provide fused, filtered, deconfliction and targeting picture with sufficient accuracy, completeness, timeliness, and tactical significance such that the information is actionable when it appears on tactical warfighter platform displays

Joint Data Network



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Lessons Learned

OAF: Kosovo

• Critical Tactical datalinks not interoperable - F-18/F-16/RJ/AWAC's	• CENT
• CID - Combat ID solutions need to feed into Link 16 and **GCCS**/TBMCS	• JF,PA,CE,EU
• Too many nonintegrated PPLI solutions and no match to JSTAR's GMTI	• JF,CENT
• **Classification firewalls** & non-integrated data-linked info prevents critical Coalition coordination for most mission areas	• JS,OSD,JF,EU, CENT
• Need to establish a JCTN or equivalent level of air track resolution for air defense	• JFCOM
• **Army Maneuver Control System and USMC Tactical Combat Operations System** cannot exchange positional information	• JF,EU,CENT
• **Stove piped national and service systems** are not interoperable and impede the exchange and access of information to tactical users.	• CENT
• ADSI has major configuration difficulties in feeding tracks to TBMCS.	• CENT

OEF: Afghanistan

• Air surveillance picture adequate; **ground surveillance picture non-existent**	• CENT

OIF: Iraq

• **Link 16 is capable beyond the limits of AWACS, RJ and any other C2 node**	• OIF LL
• **Information Required:**	
– **Threat Position**	
– **Friendly Positions with emphasis on moving forces**	
– **Specific high payoff targets**	

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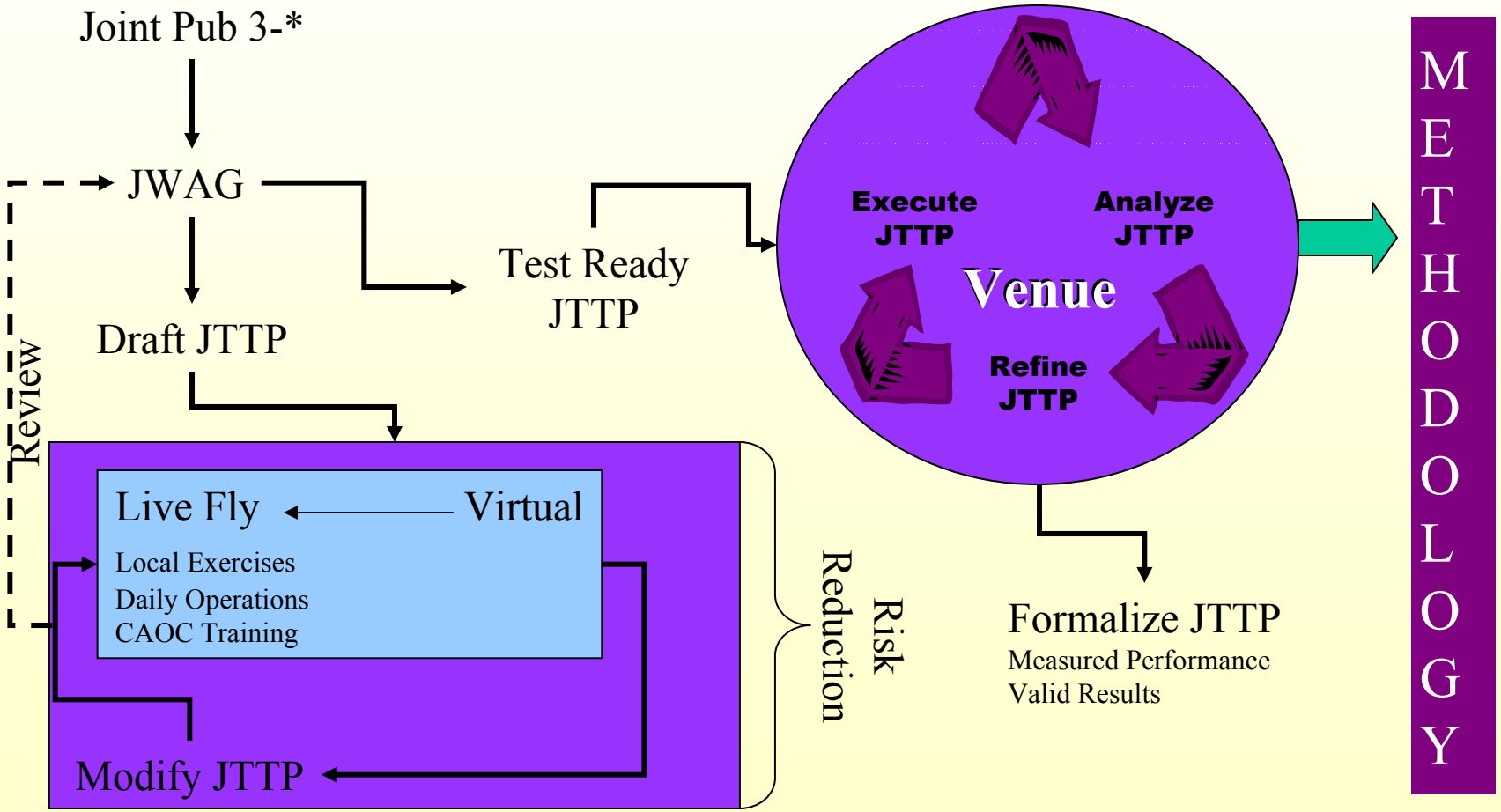
JTTP Methodology Within Current JT&E Constraints



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OSD Charter Statement

JDICE JT&E Charter Statement

Current Joint and Service TTP's are inadequate to provide critical mission information across multi-platform, fielded, tactical data links. The development and enhancement of these TTPs are critical to improve combat actions based on Joint Battlespace situational awareness.

JDICE Solution

Link-16 operational architecture modifications (Non-material solution) supported by new JTTPs will improve situational awareness in terms of effects on the tactical deconfliction and targeting processes

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JT&E

Three Year Scope

Critical

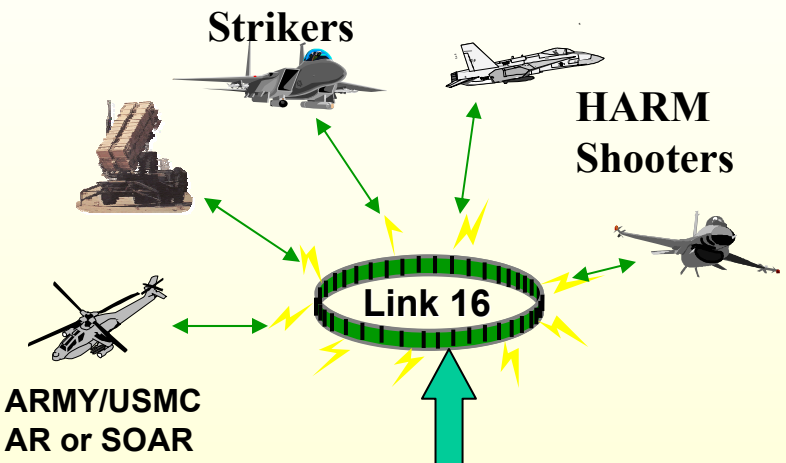
Information

ARFOR/MARFOR

National

SOF

Command and Control Nodal Stop



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TTP Filter

Man in Loop

LINK 16

Mission/Execution information needed for situational awareness, deconfliction and more efficient targeting

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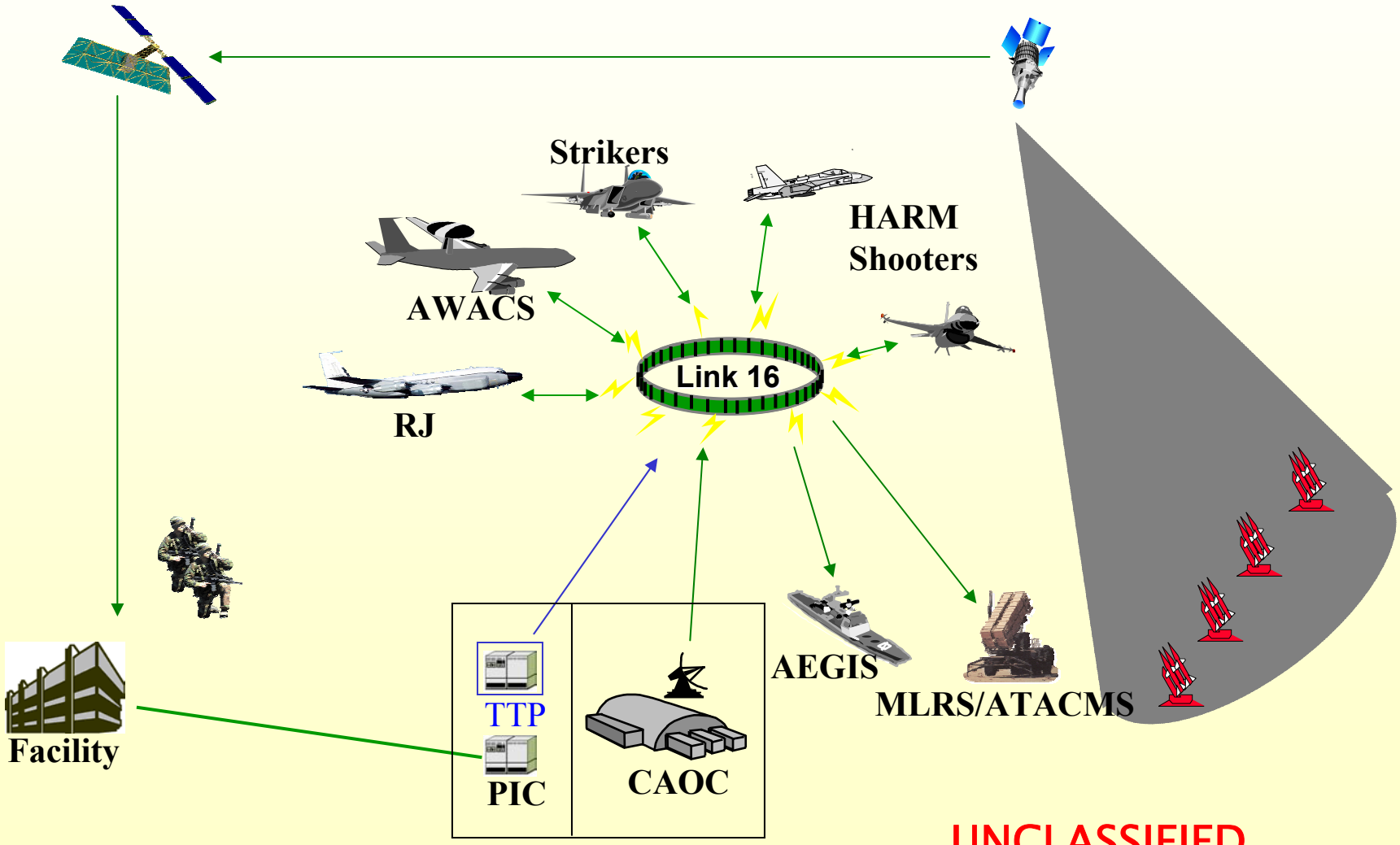
Mini-Test "C" Brought National Assets to Shooter



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Mini-Test "C" (National) Overall Objective

Provide a filtered, single source deconfliction and targeting picture with sufficient accuracy, timeliness, completeness and tactical significance such that the information is actionable when it appears on tactical warfighter platform displays

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Mini-Test "C" (National)
Overall Objective

- JTTP rapidly understood and correctly applied
- JTTP provided accurate, complete and timely information to tactical user
  - 100% of tracks met 40NM accuracy requirements
  - 100% of tracks met threat position requirements for completeness
  - 98% of tracks met 15-minute timeliness requirements
- Transmit time for 154 messages was 0:00:15 – 0:02:59 (mean 0:00:50)
- Track accuracy 19ft – 5.8nm (mean 570ft)

Aircrews: "timely, relevant information was received to make tactical decisions for both survivability and targeting"

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Warfighter Video "Targeting"

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Mini-Test "C" (National)
Warfighter Products

- JTTP requested by BG (sel) Rew CAOC Al Udied: in-place Jan 04
- Will be implemented PACOM/JOC Data Fusion Center during TS-05
- Currently coordinating for implementation at USFK HTACC
- Being executed in all RED FLAG Exercises

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Mini-Test "A" (MARFOR)
Overall Objective

Develop and provide TTPs for the accurate, timely, complete and tactically significant transfer of US Marine Corps information on forces, targets, threats, and fires via Link 16 to the shooter in order to:

- ***Reduce the Possibility of Fratricide***
- ***Improve Target De-confliction***
- ***Minimize the Impact of Enemy Ground Based Counter-Air Systems and Measures***
- ***Improve Mission Effectiveness***

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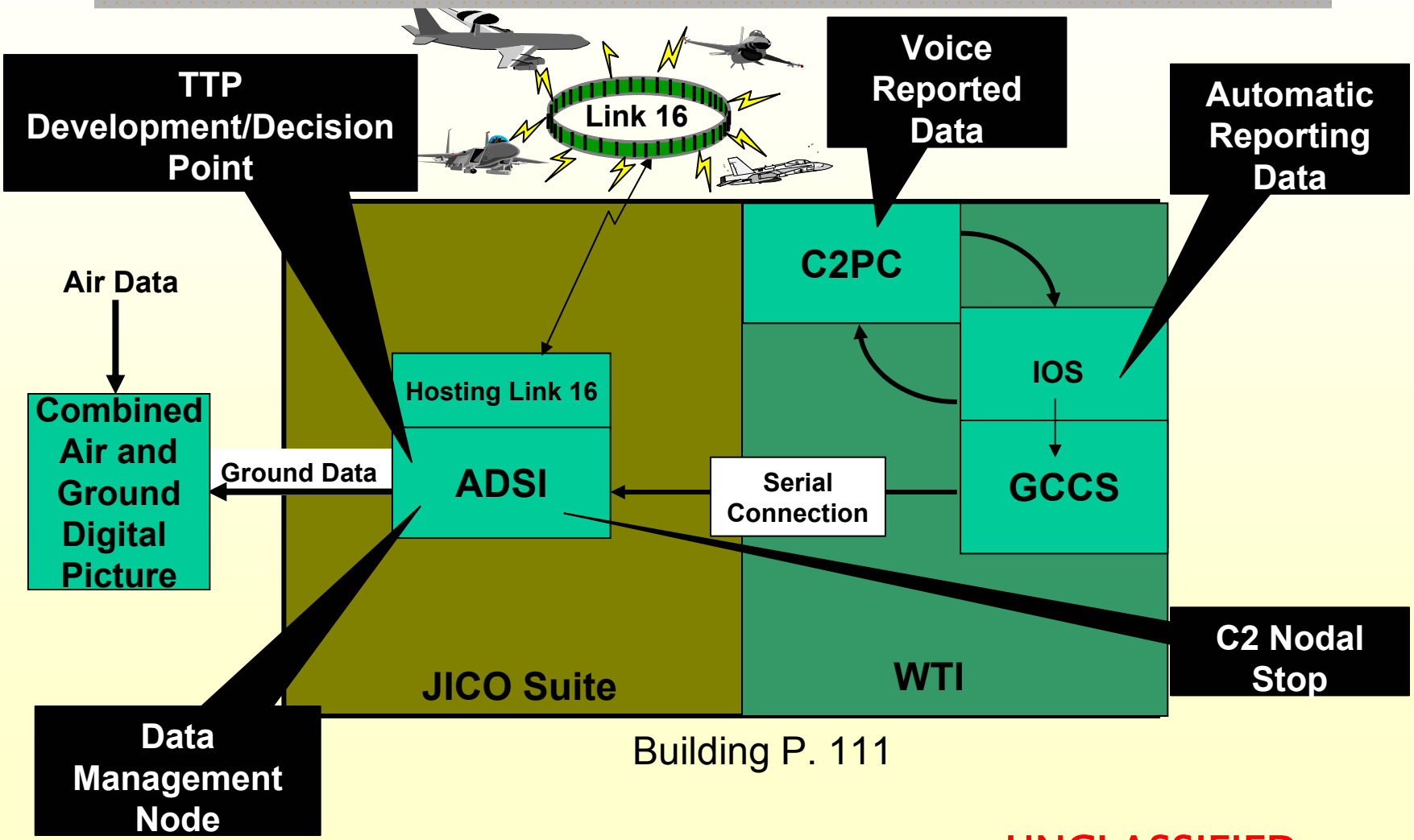
Constructed Architecture For MARFOR Test



Building P. 111

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Mini-Test "A" (MARFOR) Results

1. Relevant Blue Force Trackers (BFTs) to the Tactical Level

2. BFTs to the Operational Level (ADSI)

3. Filtered/Managed Ground Force Picture (COP)

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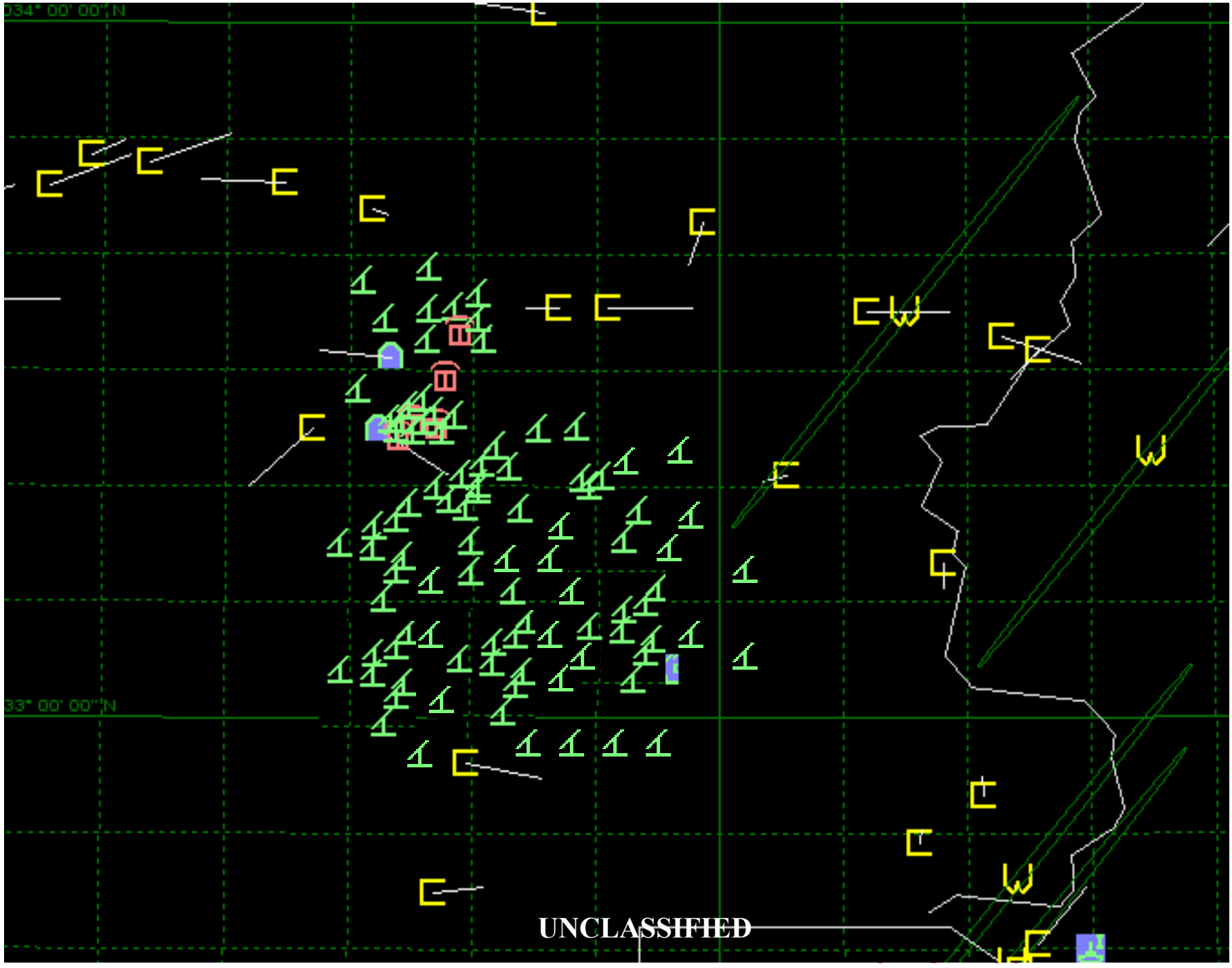
Revolutionary Event in the Marine Corp's ability to manage and control COP of their AO, to include both Air and Ground information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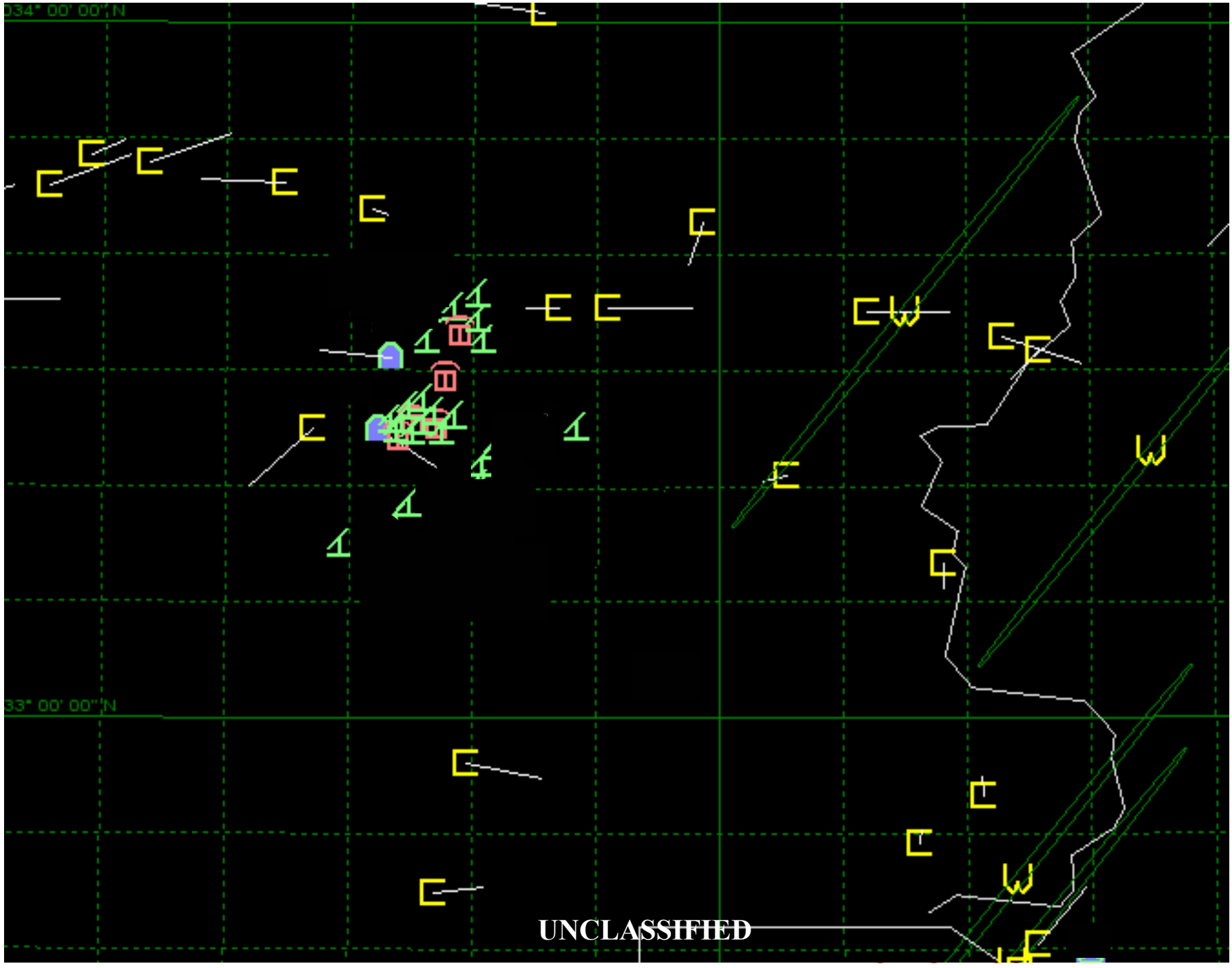

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Digitizing the CAS Environment

- WTI OAS Evolutions 5 and 6 (CAS)
- Excellent Opportunity to Explore Link 16 Digital CAS
- Use of TACTER (11 ASOS) System as Gateway
  - A digital CAS Terminal
  - Has Link 16 Software Embedded
  - Requires Link 16 Transmission Device
  - Can be Connected to ADSI

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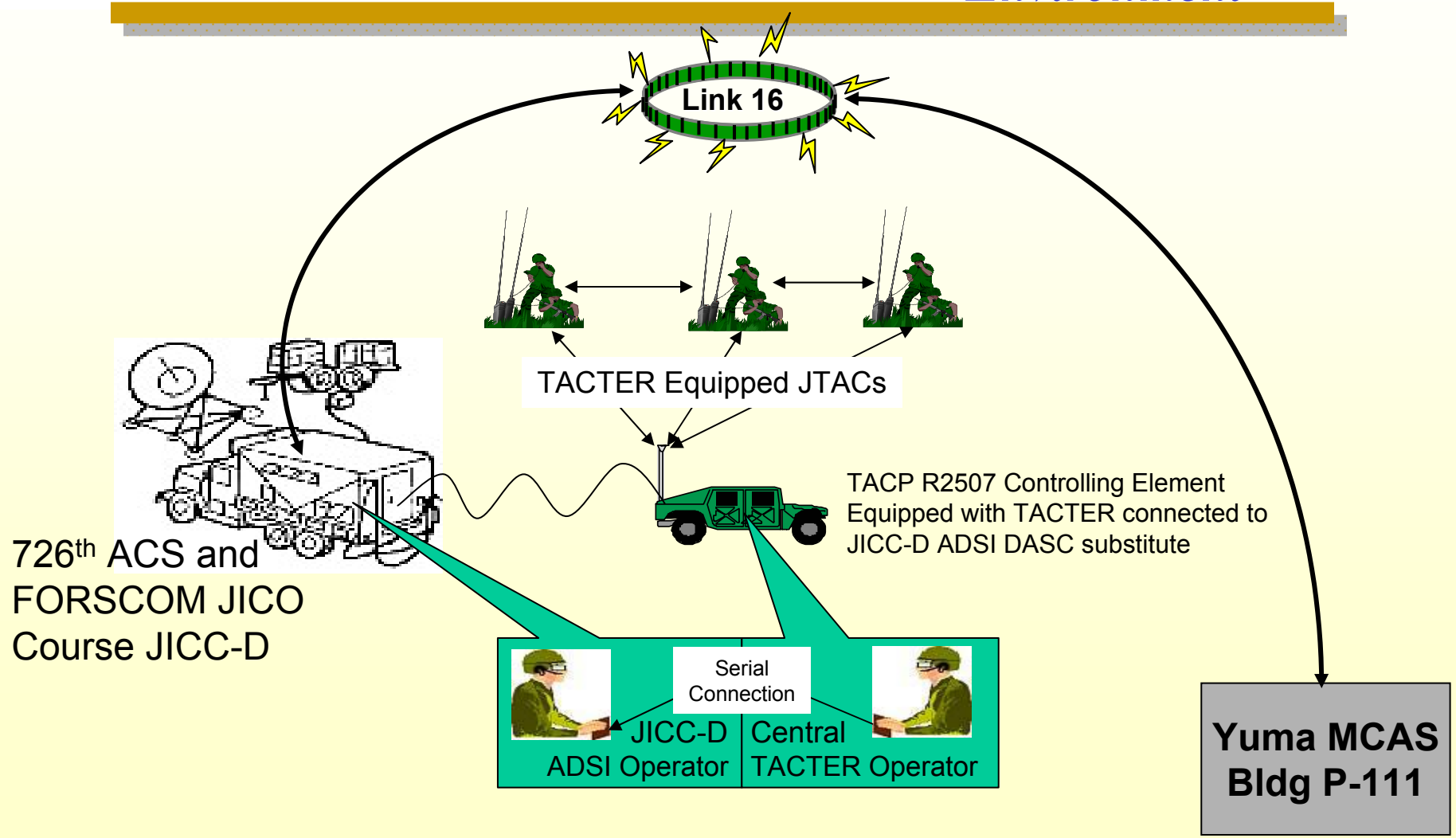
Digitizing the CAS Environment



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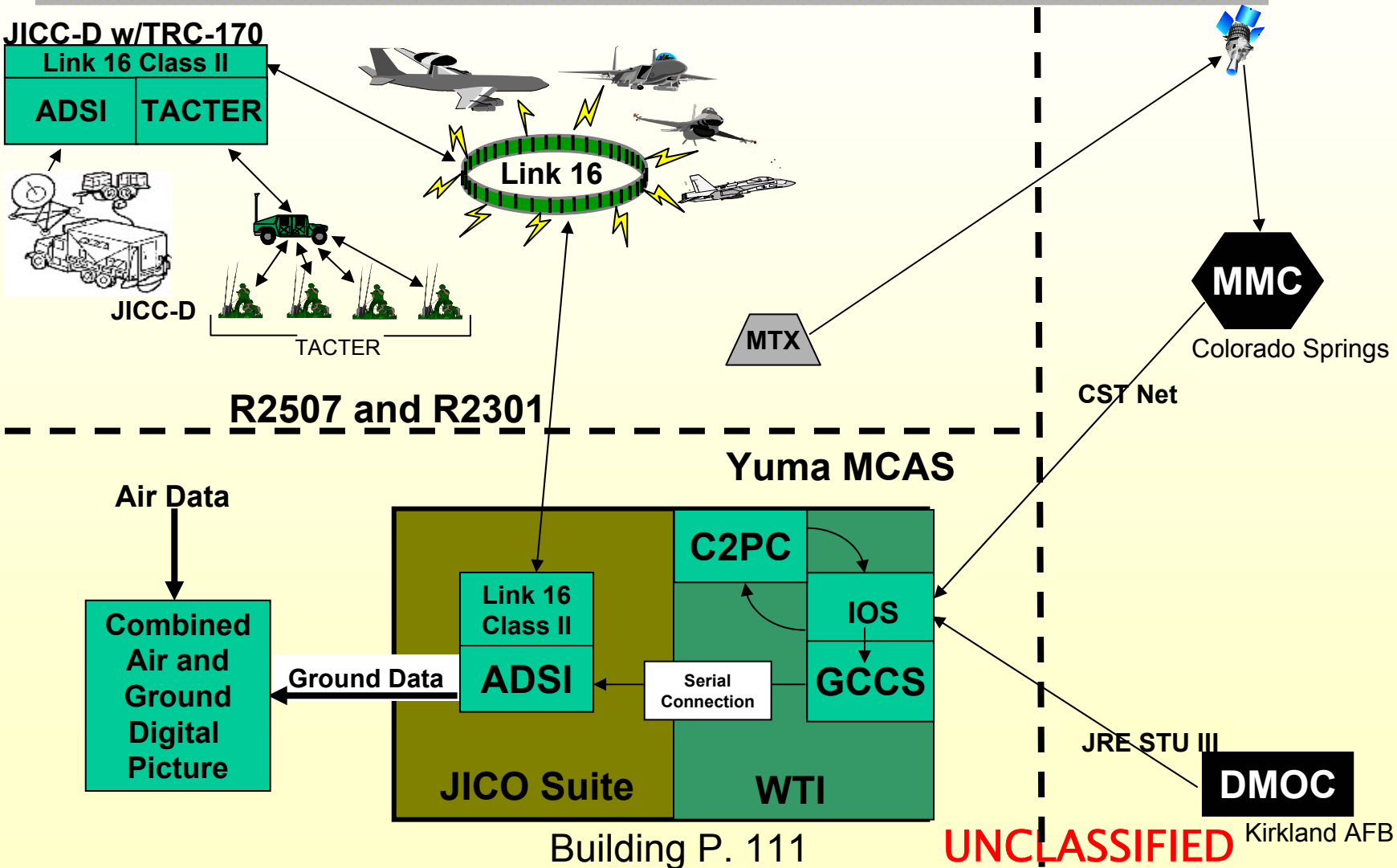
Digitizing the CAS Environment



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Mini-Test "A" (MARFOR) Warfighter Products

- JTTP immediately requested by II MEF for OIF deployment (awaiting approval)
- JTTP permanent part of Marine Corps Weapons and Tactics Instructor Course
- JDICE participating CAS TDL Working Group for digital CAS implementation (Information Defined Battlespace)

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Mini-Test "A" (ARFOR)
Overall Objective

Develop and provide TTPs for the accurate, timely, complete and tactically significant transfer of US Army information on forces, targets, threats, and fires via Link 16 to the shooter in order to:

- ***Reduce the Possibility of Fratricide***
- ***Improve Target De-confliction***
- ***Minimize the Impact of Enemy Ground Based Counter-Air Systems and Measures***
- ***Improve Mission Effectiveness***

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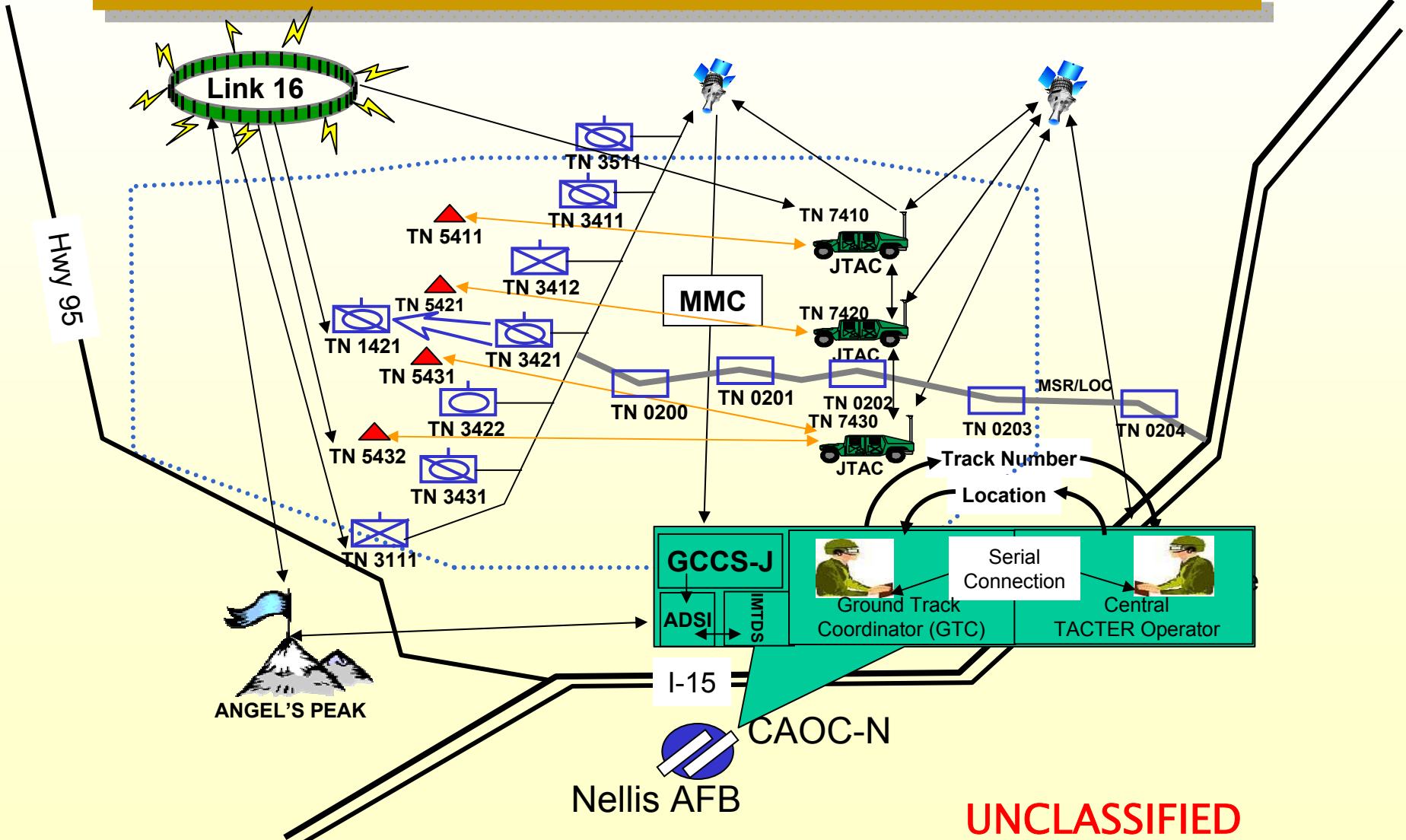
ARFOR Link 16/ TACTER Architecture



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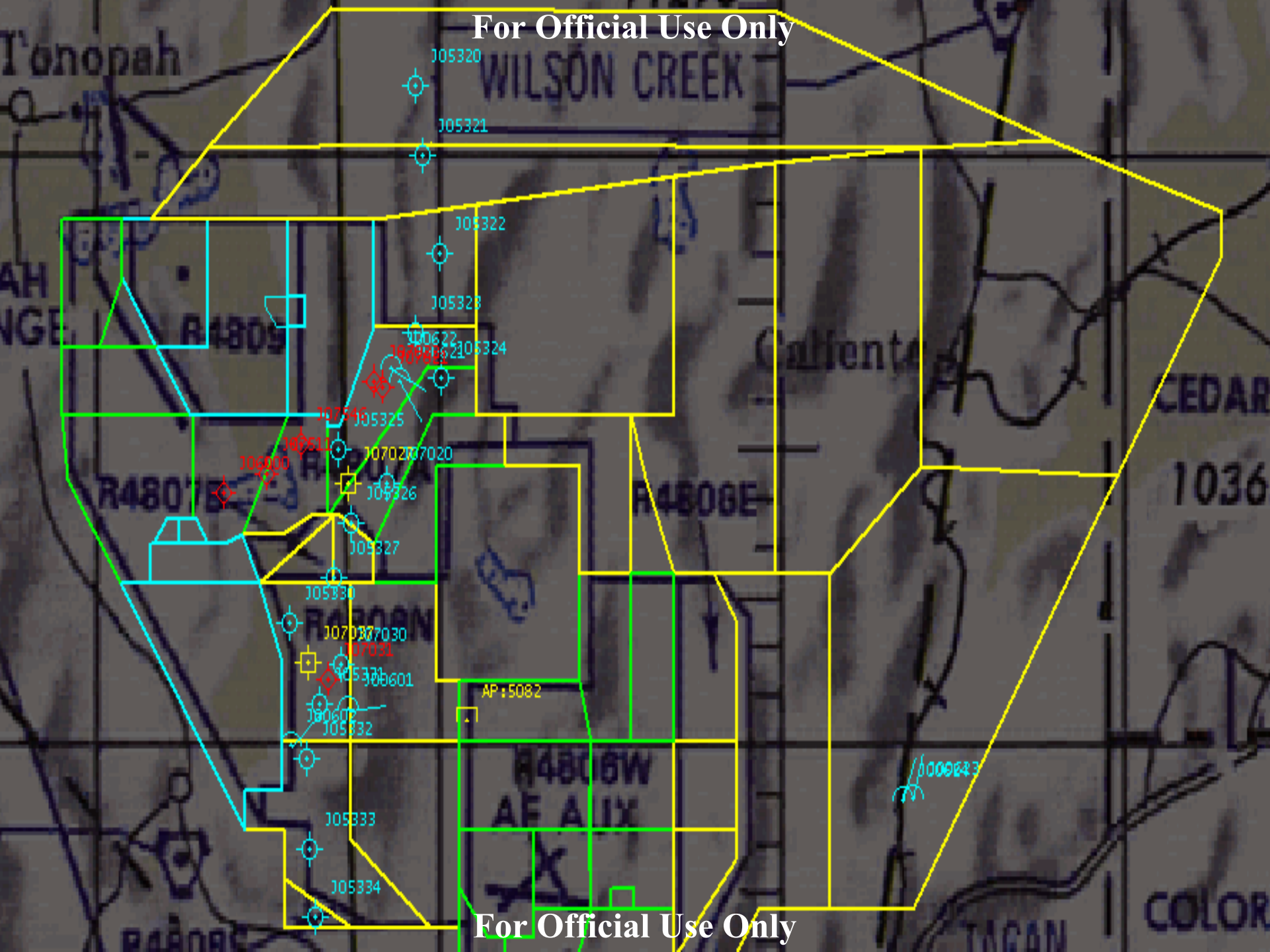

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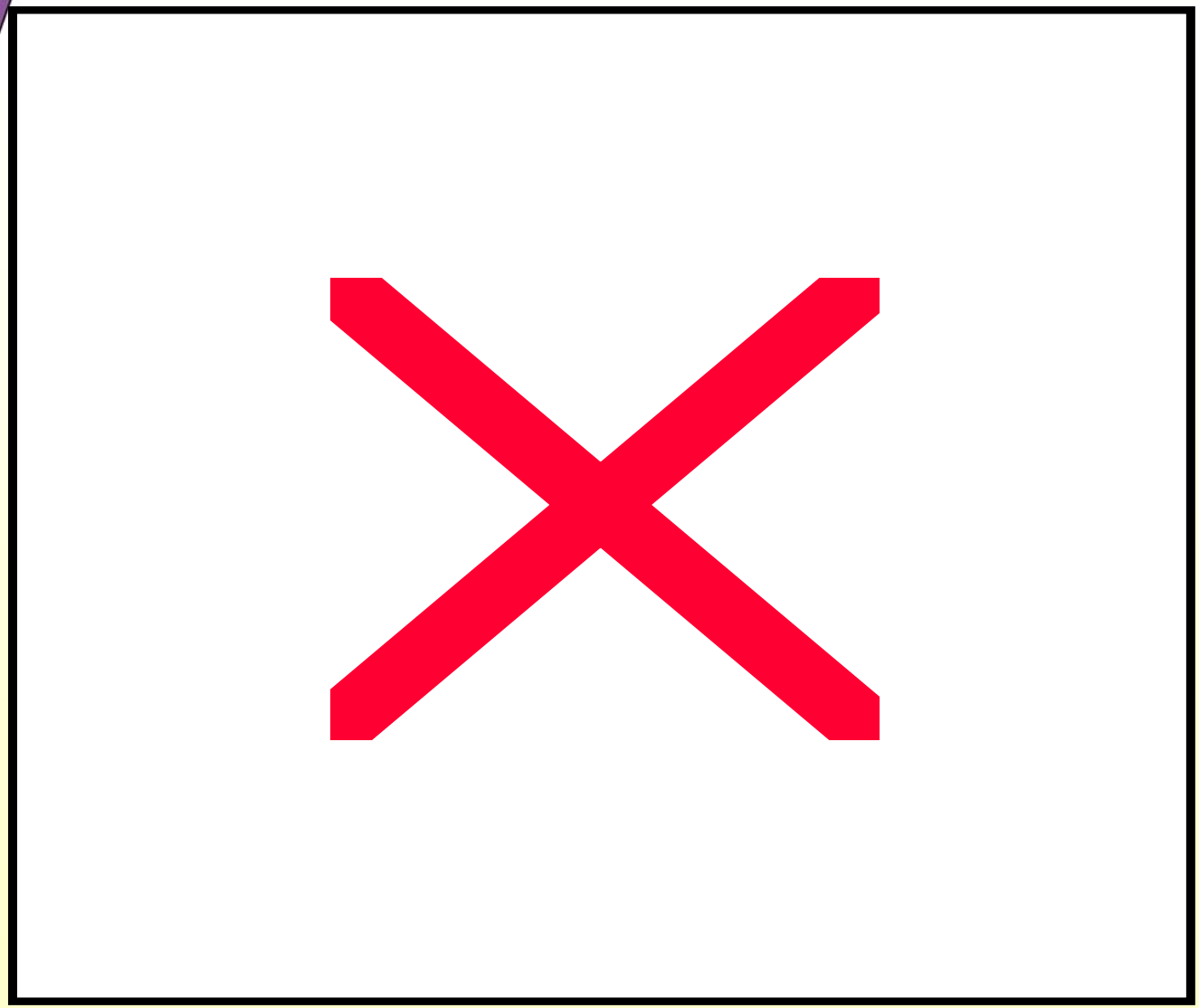
Ground FAC Coordination



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Mini-Test "B" (SOF)
Overall Objective

Develop and provide TTPs for the accurate, timely, complete and tactically significant transfer of US Special Operations Forces information on forces, targets, threats, and fires via Link 16 to the shooter in order to:

- ***Reduce the Possibility of Fratricide***
- ***Improve Target De-confliction***
- ***Minimize the Impact of Enemy Ground Based Counter-Air Systems and Measures***
- ***Improve Mission Effectiveness***

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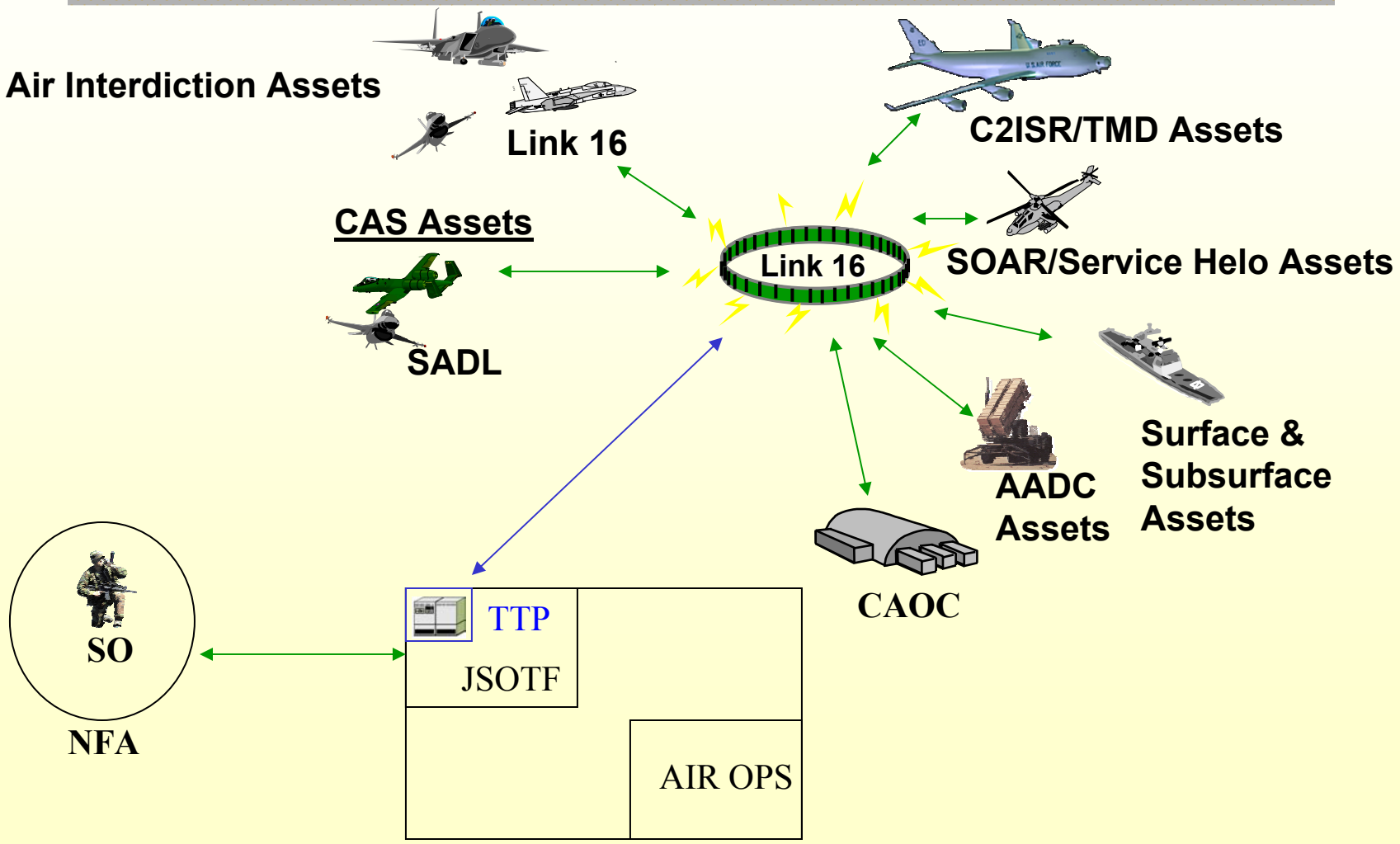
Mini-Test "B" (SOF) Architecture



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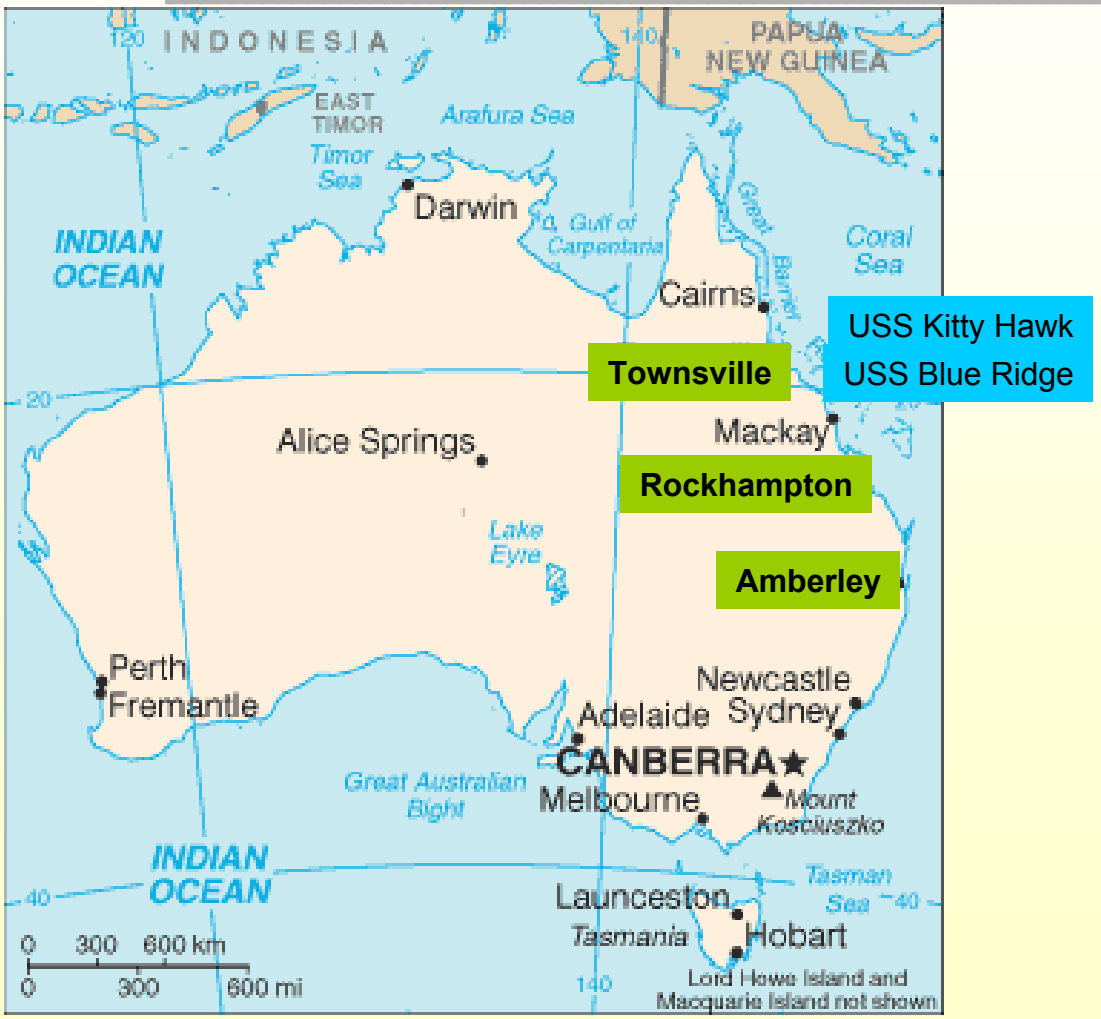
Mini-Test "B" (SOF) Collection Locations



- **RAAF Base Townsville and Townsville Field Training Area (TFTA), Queensland**
  - SOF
- **RAAF Base Amberley, Queensland**
  - F-15E and AWACS
- **Rockhampton, Queensland**
  - JICC-D
- **USS Kitty Hawk**
  - F/A-18 and E-2C
- **USS Blue Ridge**
  - Command Element

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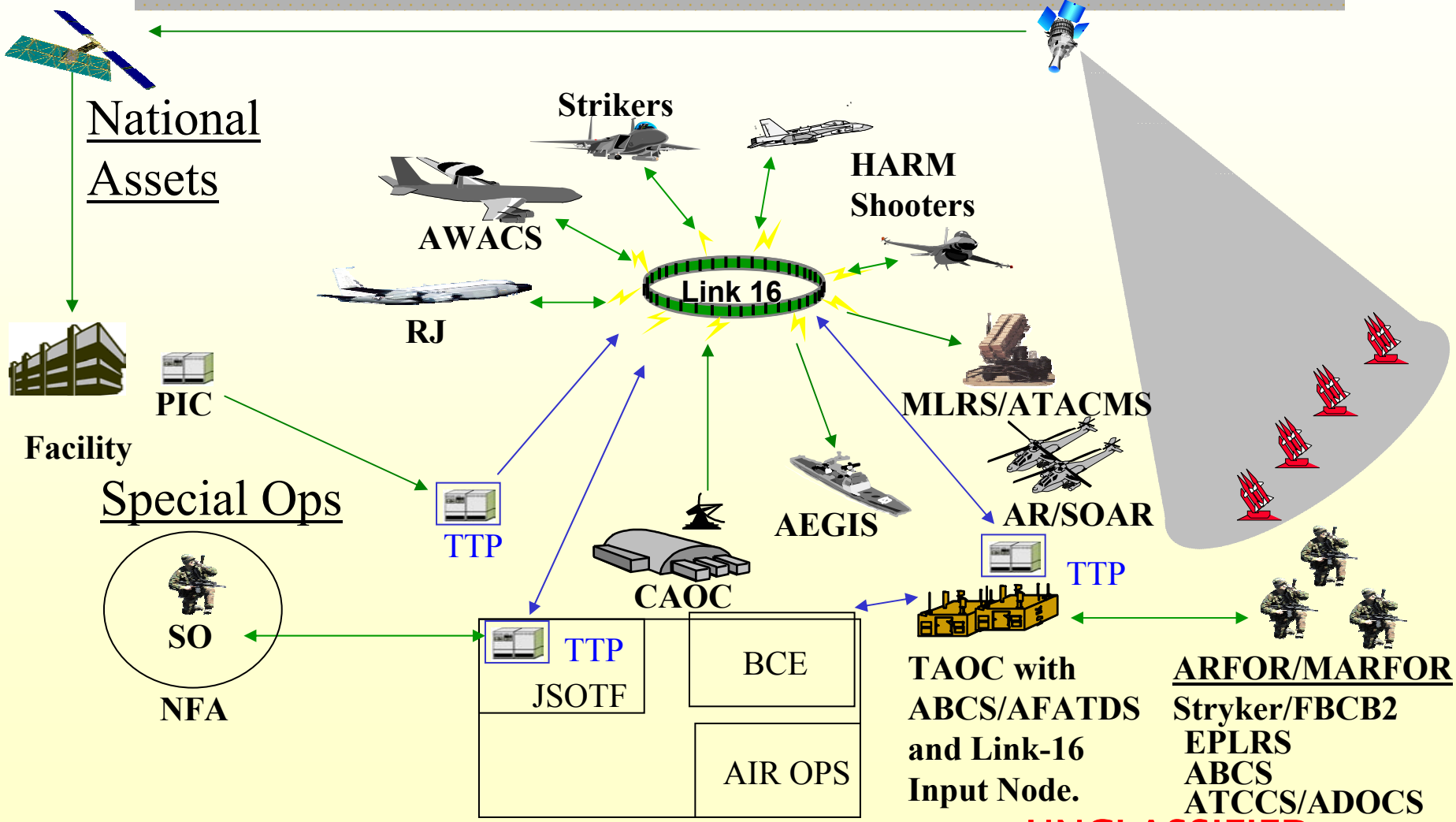
Field Test

Bringing it all together



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Questions?

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